Testimony of
Paul Yarossi
President, HNTB Holdings Ltd
Before the
Subcommittee on Highways and Transit
Committee on Transportation and Infrastructure
U.S. House of Representatives

Hearing on "Innovative Contracting in Public-Private Partnerships"

April 17, 2007

Thank you for the opportunity to provide testimony regarding innovative contracting methods. New contracting methods are becoming increasingly relevant as we look for innovative ways to provide efficient transportation services with limited resources. An efficient transportation system is vital for America's economic growth and quality of life.

BACKGROUND ON HNTB

I am Paul Yarossi, president of HNTB Holdings Ltd. I have spent more than 30 years in the transportation industry. I also serve as co-chair of the American Road and Transportation Builders Association's SAFETEA-LU Reauthorization Task Force. This task force will develop the association's legislative agenda for the next reauthorization of the nation's federal highway and transit programs.

HNTB is an engineering, planning and architecture firm with a 93-year history of pioneering next-generation solutions for the nation's most challenging transportation issues. We are a national infrastructure firm with more than 3,000 professionals in more than 60 offices throughout the United States.

HNTB is a national leader in working with clients on innovative contracting methods including design-build and P3's. For design-build, in California HNTB was both engineer of record and prime consultant on three out of four design-build contracts developed for the Bay Area Rapid Transit District's extension to the San Francisco International Airport. The project was an FTA-sponsored Turnkey Demonstration Design-Build Project, and BART's first-ever design-build project.

In Minnesota, HNTB served as the general engineering consultant to create a statewide design-build program for the Minnesota Department of Transportation. For the Georgia Department of Transportation, HNTB served as the designer for the state's I-95 widening projects, which was Georgia's first foray into design-build. In Missouri, HNTB is providing professional services to the Missouri Department of Transportation for the I-64 reconstruction design-build, the first design-build project in Missouri.

For P3's, HNTB is the lead consultant involved in all activities related to the development, review and/or implementation of P3 projects across the state of Georgia

We are leading the Texas Department of Transportation's corridor engineering team for the Trans Texas Corridor Oklahoma to Mexico/Gulf Coast Element, which is being implemented under the first public-private partnership, or P3, program in Texas

We also have been called upon to advise departments of transportation and legislators on the growing challenge of developing our transportation system.

STATE OF TRANSPORTATION

Not since the inception of the interstate system have the country's growing transportation needs outweighed the available funding across the states. This challenge has created change among our client organizations in terms of their increasing reliance on consultants to deliver programs; consolidating and prioritizing programs; bringing in private dollars through P3s and using innovative techniques, such as design-build.

Essentially, given the revenue and staff available, departments of transportation and transportation owners across the country cannot afford to maintain their existing transportation system let alone build new capacity within current funding levels.

There is no silver bullet that will solve these financial problems. However, new and innovative ways to finance, design, build, operate and maintain transportation facilities must be part of the solution.

DESIGN-BUILD

In this industry we are seeing a growing number of states adopt design-build methods. The fundamental element of design-build delivery is that one entity assumes responsibility for the majority of the design and all of the construction. This entity may be a single firm, a consortium, a joint venture or other organization. However, most design-build is accomplished through a teaming of unrelated firms.

The primary benefit generally attributed to the design-build delivery method is the achievement of design and construction speed and economy, which results from the combination of construction and design talent at the outset of the project. This allows the design to be tailored to specific versus generic construction methods, and the resulting design is adapted to the contractor's best methods and skills. Also, a stronger incentive toward economy exists during the design process if competitive procurement is required.

A secondary benefit of design-build is cooperative problem solving during construction, which is often not the case for conventional design-bid-build projects. Design-build offers single-point responsibility, including removal of the owner from mediating disputes between the designer and constructor.

By definition, design-build eliminates the separate responsibilities for the design and construction and sometimes includes financing and operations. Its rise in popularity can be attributed to a number of perceived advantages over the traditional methods, such as:

- Single source responsibility and simplified owner role
- Reduced number of resources required from owner
- Less cost escalation as a result of fewer claims (design errors and omissions are one)
- Time savings since design and construction are done concurrently
- Increased possibility of innovation
- Private financing of needed public works when public funding is lacking

EXAMPLES OF DESIGN-BUILD SOLUTIONS

I-15 in Salt Lake City, Utah: Using a design-build approach, the Utah Department of Transportation completed the 17-mile reconstruction of I-15 in July 2001. The project was completed in four and a half years at a cost of about $1.63 billion. *At the project opening celebration UDOT handed the Governor of Utah a check for $30 million because the project was completed under budget by using design-build delivery.*

Missouri Department of Transportation's I-64 Reconstruction: HNTB is assisting MoDOT with the I-64 reconstruction in St. Louis, Missouri, which is a $535 million, 12-mile program - and the first design-build project in Missouri. *The original cost estimate to design and construct the project was over $600 million. Because of MoDOT's innovative design-build approach, essentially all improvements included the original cost estimate are being provided for $420 million.*

Minnesota Statewide Design-Build Program: HNTB served as the general engineering consultant team to create a statewide design-build program for the Minnesota Department of Transportation. Since 2002, MnDOT has awarded five best value design-build projects totaling more than $650 million.

Bay Area Rapid Transit to San Francisco International Airport Extension: The extension included eight miles of underground subway, and more than one mile of aerial bridge structures. The $730 million project was BART's first-ever design-build project.

Caltrans: Design-build is a popular and successful project delivery option in the state of California, although Caltrans has not yet adopted it as an official project delivery method. Examples of design-build projects, in addition to BART, include the Alameda Corridor Trench and Pasadena Gold Line in Los Angeles and the San Joaquin and Eastern Transportation Corridors in Orange County.

Common elements in making these projects successful were repetitive type of work and very common structure types. This type of a project allows the owner to bid the job based on preliminary design completed to the 15% level with the design-build contractor, then producing the final design using their own engineer. Risks to prospective contractors are fairly nominal as they usually know this type of work very well and have sufficient information on the plan drawings to estimate and submit bids keeping their risk factors at a reasonable level.

DESIGN-BUILD LESSONS LEARNED

Many factors must be considered when determining the best procurement method for any given project. Transportation agencies should explore design-build based on the project's goals, complexity, funding, design intent and responsibility and risk allocation. Defined contract documents are essential so that objectives are spelled out. Design-build thrives in situations where designers and design-builders have a fair degree of latitude in determining the solution to a given problem or situation.

The most commonly known advantage of design-build is time savings. Design-build generally allows construction to begin sooner with final project delivery in a shorter period of time compared to traditional project delivery methods. This is primarily because the design and construction can proceed concurrently, and the design and construction interface is managed by a single entity.

In addition, design-build projects typically see less cost escalation during the course of the project, primarily because the primary sources of claims, design errors and omissions or design/construction interface issues are removed from the owner's realm of responsibility. Generally, the more flexible owners are in their design-build approach the more innovative design-builders are resulting in owner expectations being exceeded.

However, design-build is not a cookie-cutter approach for all projects and it will not close the gap between our significant transportation infrastructure needs and funding.

PUBLIC-PRIVATE PARTNERSHIPS

Another trend in innovative contracting is public-private partnerships, or P3s. As transportation agencies continue to seek solutions to funding shortfalls, we are seeing a growing reliance on the private sector. Departments of transportation are relying on the private sector to provide more services and help fund projects, both in terms of new construction and the maintenance of current infrastructure. With this we are seeing a rise in P3s as another form of contracting innovation.

Essentially, P3s are strategic partnerships between an owner of a transportation facility, generally the state government and a private sector developer. The owner awards a concession or a lease to a developer to finance, design, build, operate, toll and maintain a highway, bridge, transit or railway line over a specified period of time. Partnership is the key word in these contractual arrangements. Partnerships are formed to accelerate project development; improve the cost-effectiveness of project and service delivery; and preserve transportation infrastructure.

But as we turn toward P3s and design-build, we need to proceed in a very deliberate, systematic way with an overall vision of the future transportation system. The focus of P3s should be to reduce congestion and manage traffic demand not just to lease existing facilities for quick cash. And design-build should be considered for those complex projects where time and money can be saved with minimal disruption to quality of life.

Although both are innovative methods, it is important to keep in mind that some of these techniques are not new. The United Sates was built by P3s. For example, in the 19th century there were more than 2,000 charters for private companies to own or operate toll roads or bridges. Today, nearly two dozen states, such as Oregon, Texas, Virginia, Georgia and Florida, have enacted legislation allowing P3s to finance transportation projects, and several others have new laws pending.

EXAMPLES OF P3 SOLUTIONS

Georgia: The state of Georgia adopted P3 legislation and has been inundated with un-solicited proposals. It took a step back, modified the legislation and is developing a master plan of managed lanes and truck-only lane systems to be built by P3s. HNTB is working with the state to create the master plan and then evaluate and contract the individual P3 projects to build the system.

Missouri: Missouri is introducing its Safe and Sound Bridge program which is a P3 to rehabilitate and maintain more than 800 deteriorated bridges. It includes the initial financing. This does not require a user fee (toll) and demonstrates that P3's can serve states purely as a financing mechanism. This is a type of bond and build program.

California: Another example of P3 innovation is SR-91, the first high occupancy toll lane/managed lane in California. HNTB was on the initial private-sector team, and I can tell you the concept was risky. We wondered, "Would people be willing to pay for use of a lane adjacent to a free lane?" Ultimately, the project was very successful and HOT lanes are now part of the federal program.

I believe a very important precedent on SR-91 was the setting of future toll rates. They were established based on a mathematical formula tied to the traffic demand for the facility. When the facility first opened a little more than 10 years ago, the maximum toll was about $2.50 and now it is $9.25, by far the highest rate per mile in the nation, but the public has accepted the concept. It is truly market based. The more people want to use the facility, the higher the toll rate. The pricing maintains maximum traffic flow and gets the most out of the system.

Texas: Texas has laid out its plans for Trans Texas Corridors of 4,000 miles of new roadways, costing up to $185 billion. Now the state is building it one step at a time with a combination of private concessions, public roadways and regional toll authorities. HNTB is working with the state to negotiate for the first segment, a $7 billion concession for a new Greenfield project - TTC Route 35. This concession contract will have a future revenue sharing component on a sliding scale, which is extremely important to protect the public's interest and guard against unreasonable super profits.

MARKET PRICING WITH PUBLIC-PRIVATE PARTNERSHIPS

In the future, market pricing to manage traffic flow will be commonplace, and we need to consider this in P3s and continue to be innovative. In many downtown urban areas such

as Seattle there are several major multi-billion dollar projects that may be built as a P3 tolled facility. In addition, there will be a system of managed lanes around the area that would work best if the public agency varied the pricing to manage the traffic flows. If the individual projects were built as traditional P3s, where the private sector financed the project and had the right to keep the toll revenue, conflicts would arise if the toll rate varied and traffic patterns shifted. But, if we built the facilities as P3s and reimbursed the private investor by availability payments and still tolled the facility, the state would keep the toll revenue. The state or public sector could vary toll rates and manage traffic and the private sector would get a fixed reasonable return.

PUBLIC-PRIVATE PARTNERSHIP LESSONS LEARNED

We need to learn from these experiences and continue to be flexible and innovative as we define transportation solutions. Some of the P3 lessons we have learned include:

- An overall vision of the entire transportation system is needed up front
- Careful assessment is needed to determine the best procurement method
- Tolling an existing facility needs to overcome public opposition. This opposition is based upon the public's belief that they are paying for an existing facility twice
- If existing facilities are tolled, the revenue must stay in transportation
- We should consider toll pricing based on traffic demand to manage the flow and get the most from our systems
- Future toll revenue sharing protects the public's interests and ensures that all revenue does not go to the private entity
- Consider mass transit components as well

CONCLUSION

Given funding shortages, states are finding their own solutions and seeking flexibility in how they contract so they can deliver projects. It is clear that there is no silver bullet that works best for every project. For some states, changing their project delivery methods through design-build has proved to be a way to move projects forward. For other states, P3s have provided the funds needed to upgrade facilities and in some cases created new, more technologically advanced ones. The fact remains – we need to find ways to increase our resources in order to maximize the way we deliver transportation projects now and in the future.

I hope this has given you insight into the changes we are undergoing and what challenges and opportunities lay ahead. We look forward to advancing transportation in the United States and are eager to help shape innovative methods for our transportation future.